

FIG.1A

PARAMETER		CORAL	TORAL
SOURCE GAS (sccm)	TMCTS	5.0	1.0
	O ₂	250	0~200
	CO ₂	5000	
POWER (w)	HF	600	300
	LF	400	200
PRESSURE (torr)		4	

FIG.1B

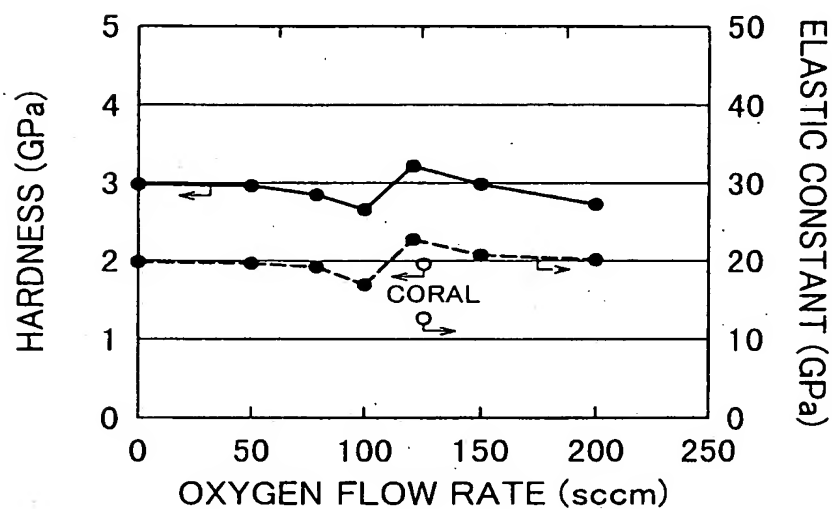


FIG.1C

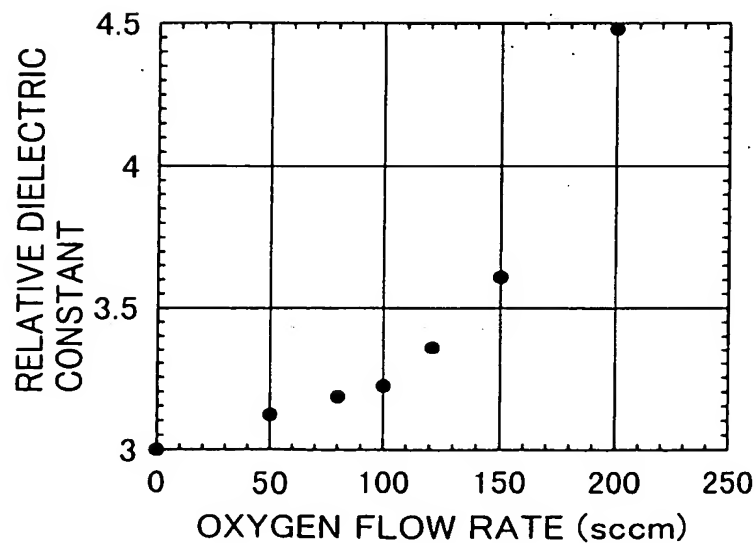


FIG.2A

FILM TYPE		COMPOSITION (at %)			
		H	C	O	Si
ESL3(SiC)		39.0	19.7	20.3	21.0
CORAL		32.0	16.1	33.7	18.2
TORAL	150	11	15	48	26
	50	20	18	35	27
	0	20	21	35	24

FIG.2B

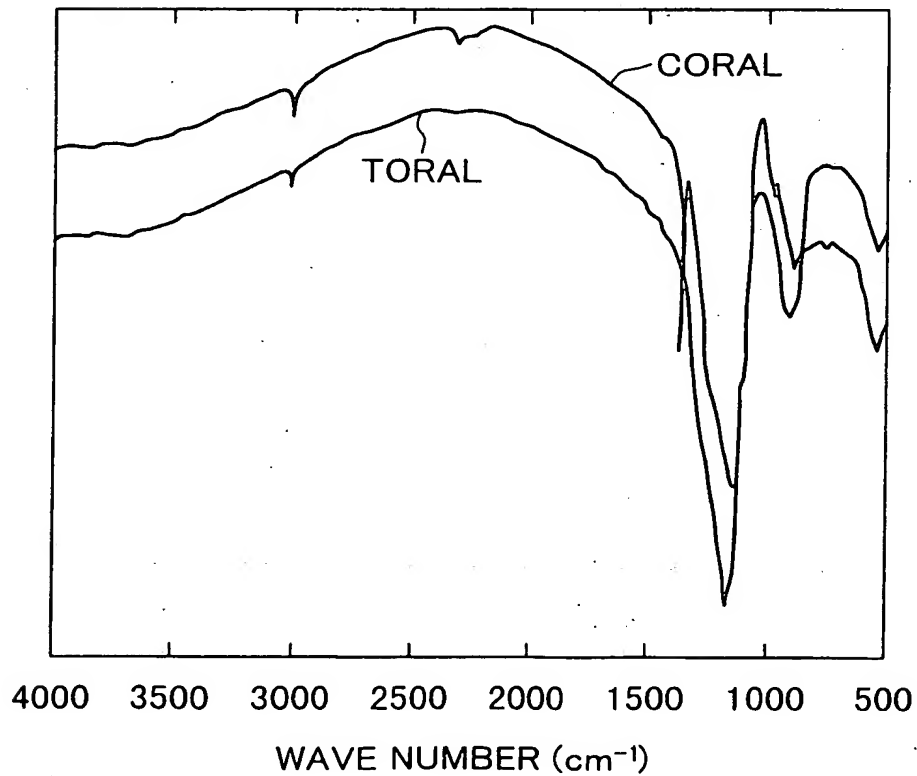


FIG.3

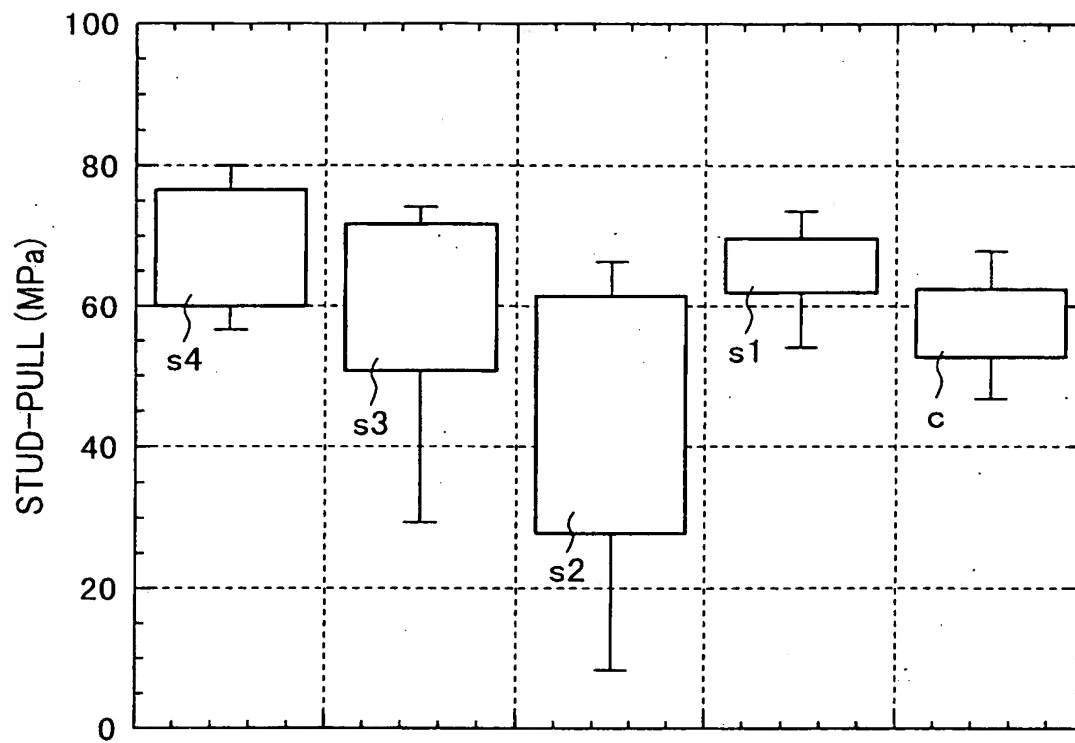


FIG.4A

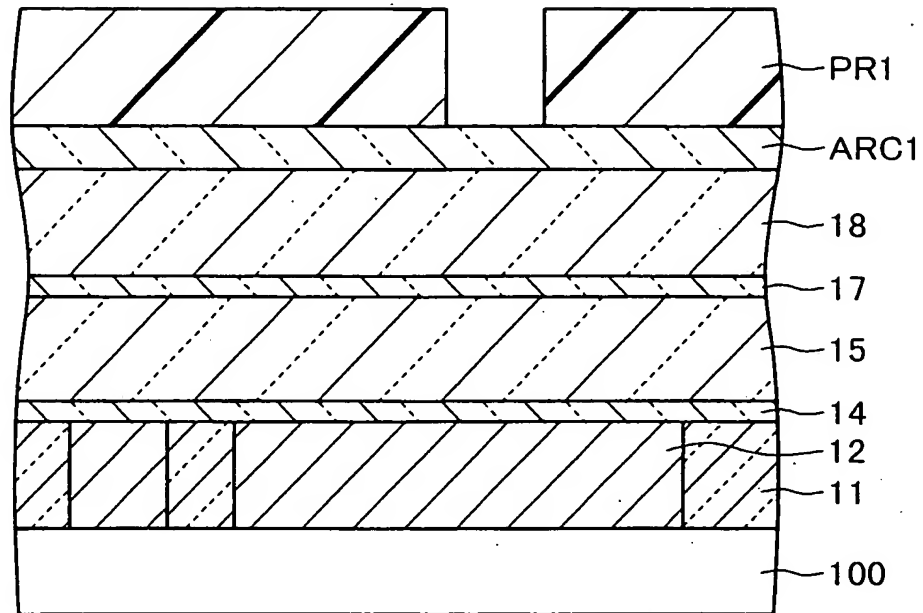


FIG.4B

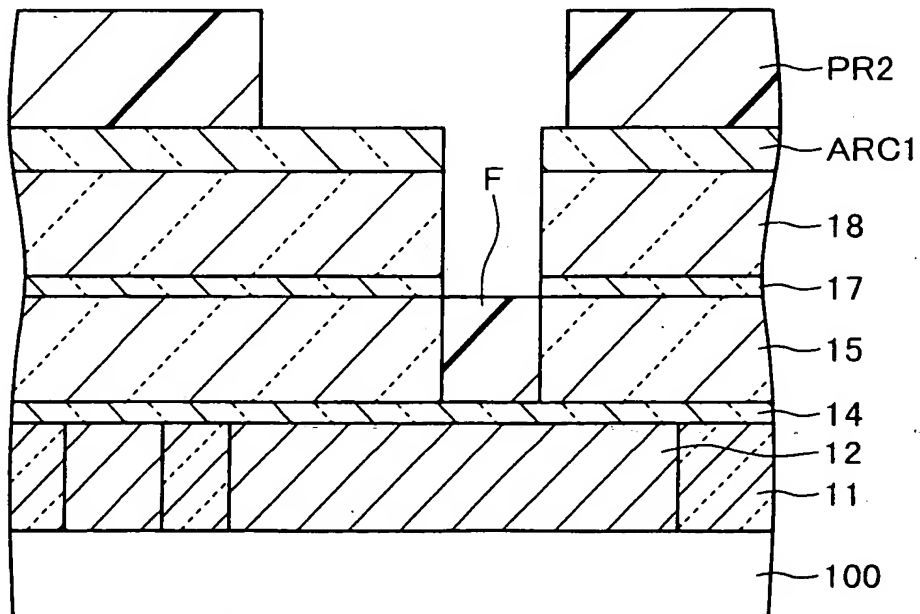


FIG.4C

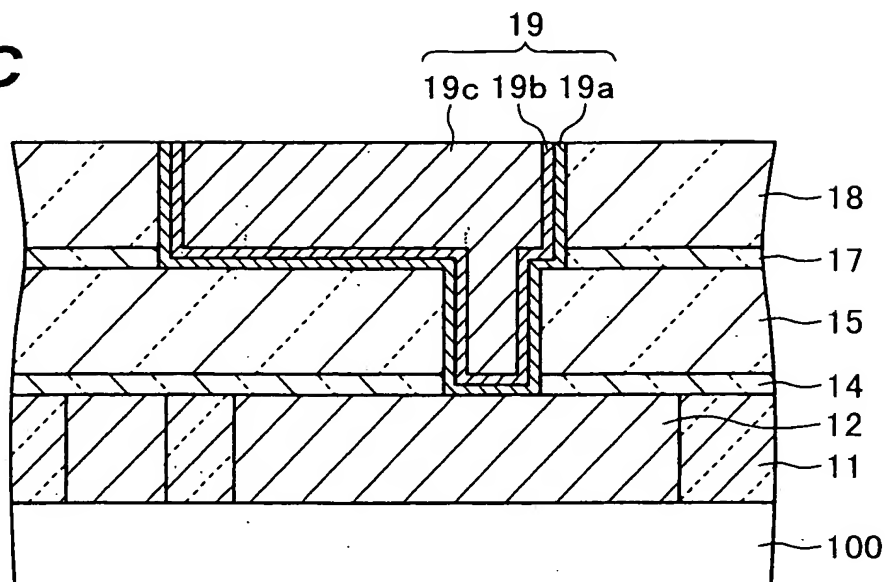


FIG.4D

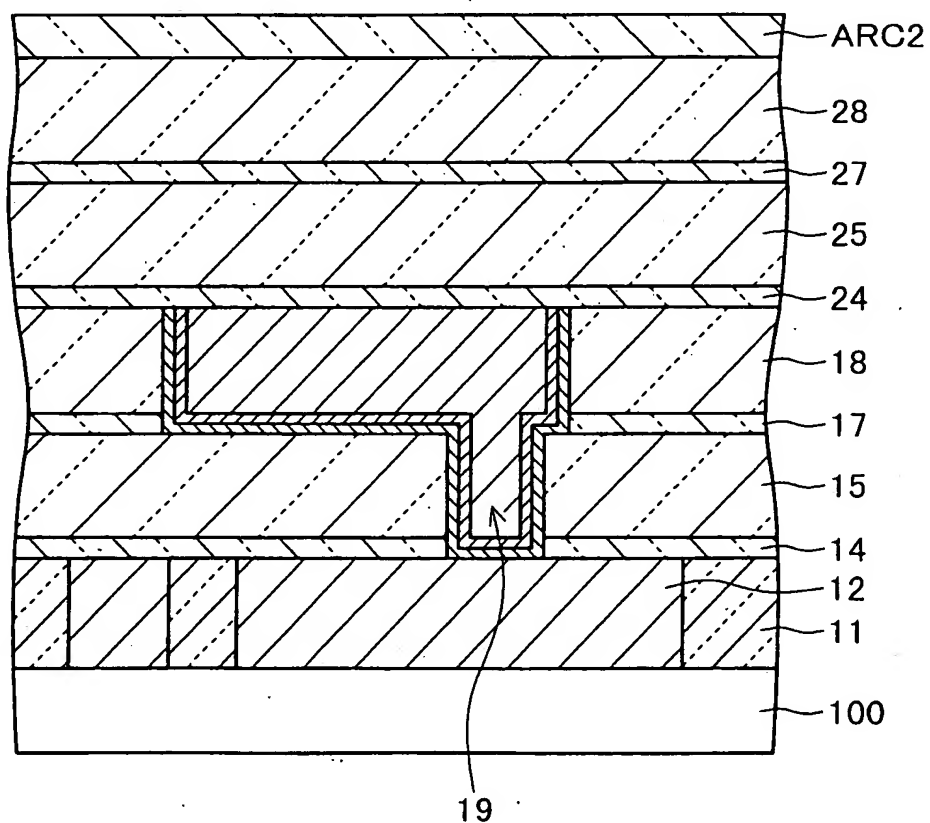


FIG.5A

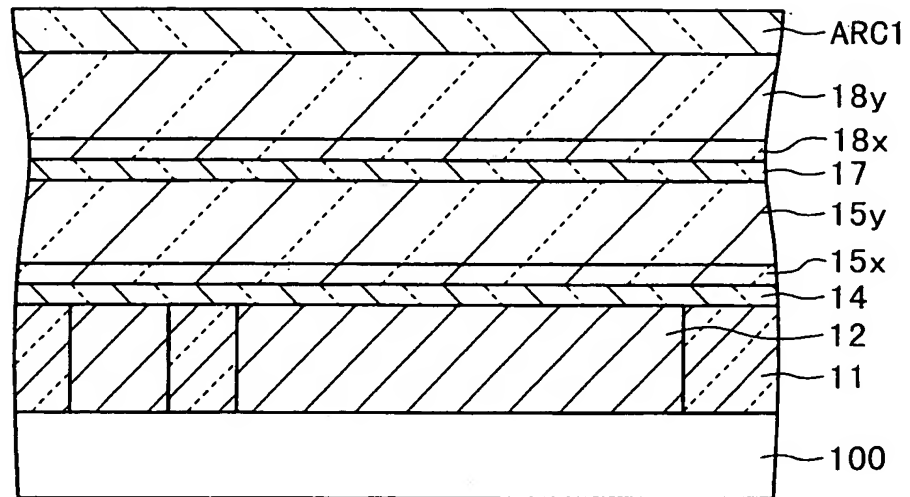
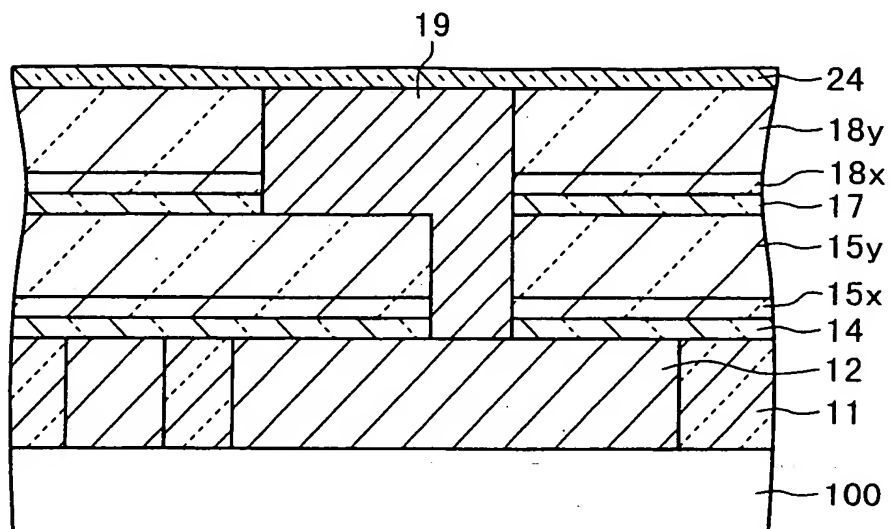


FIG.5B



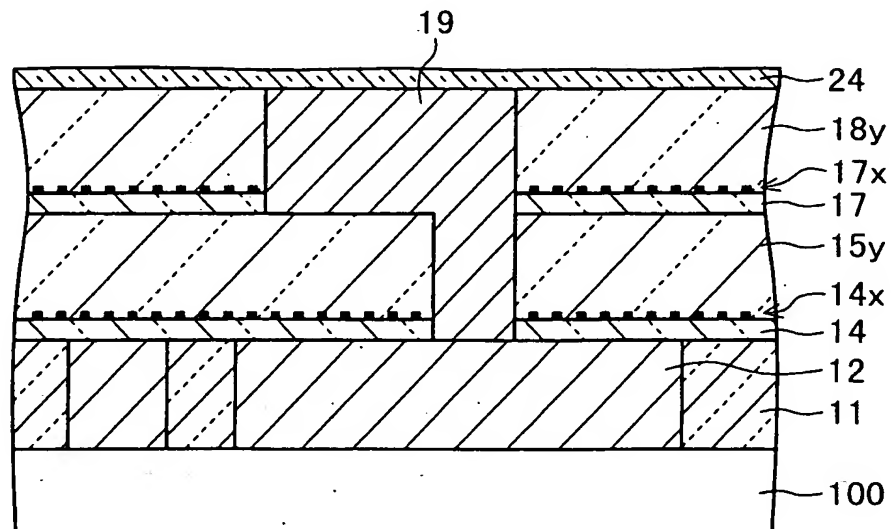


FIG. 7

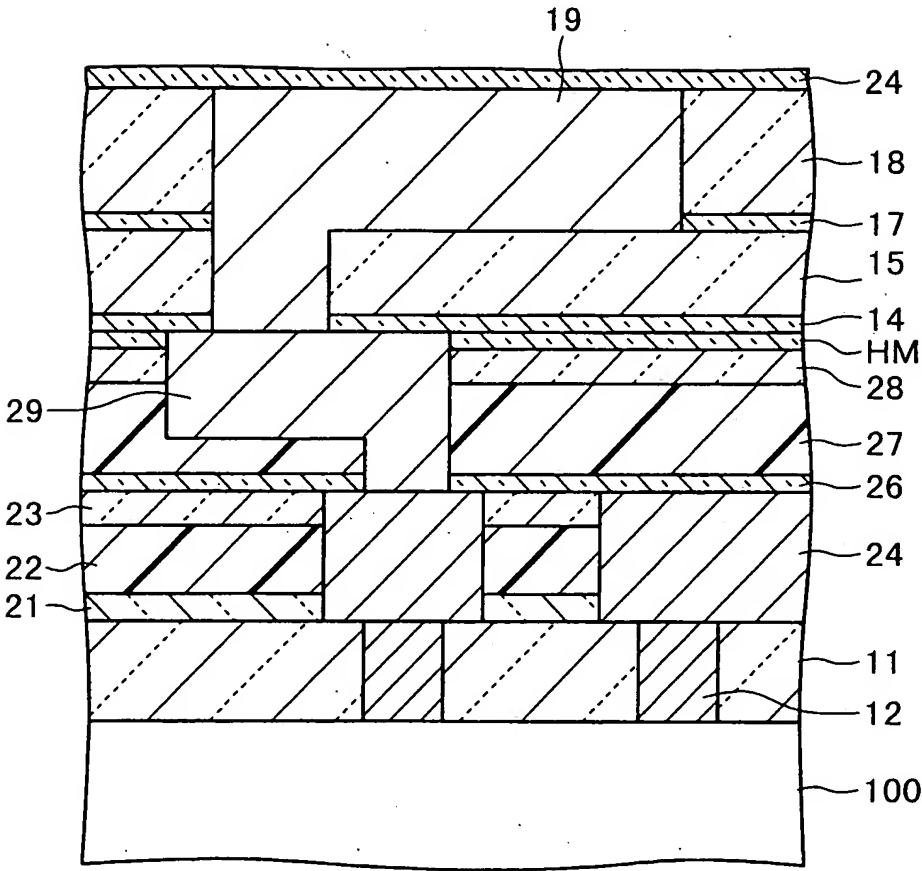


FIG. 8

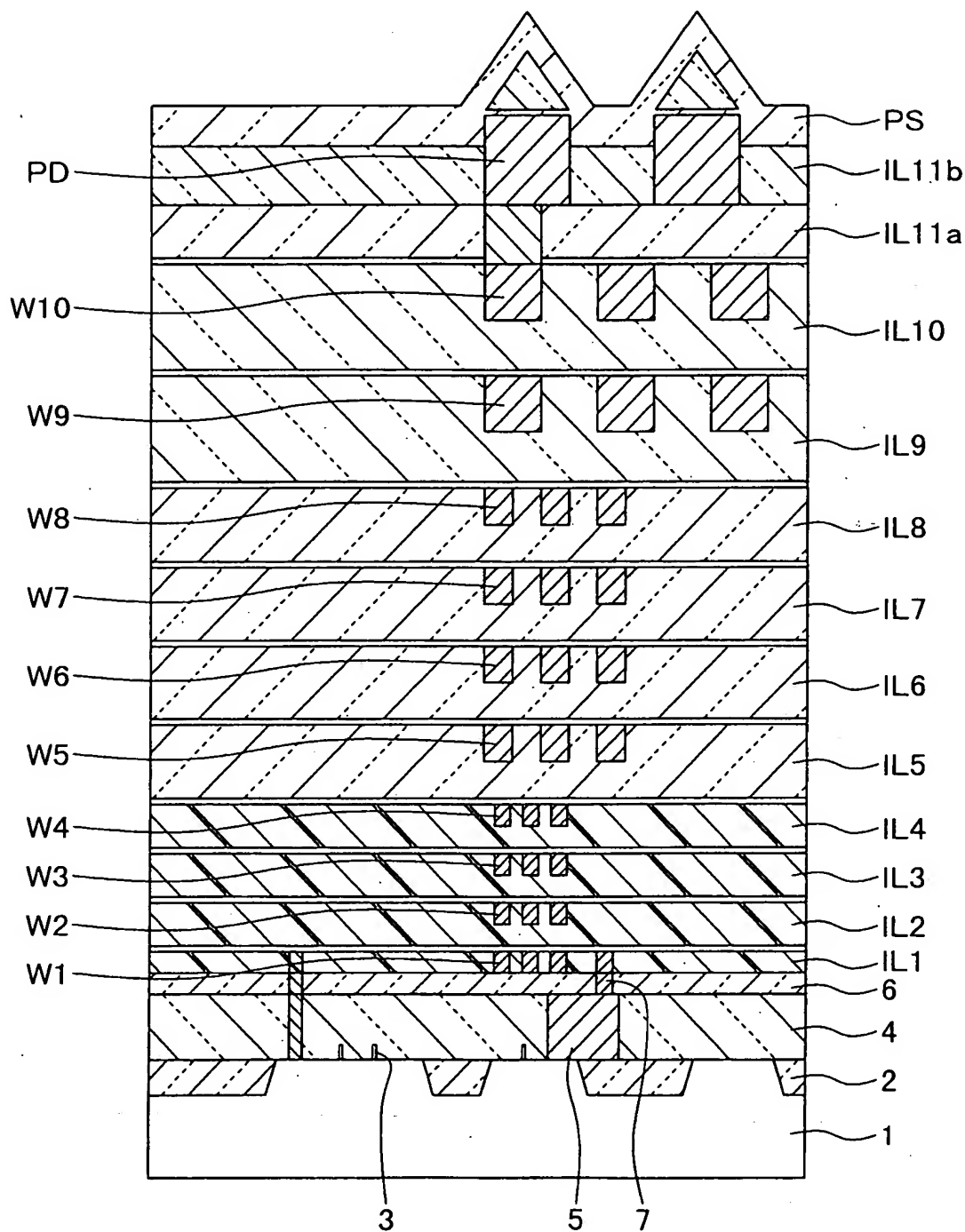
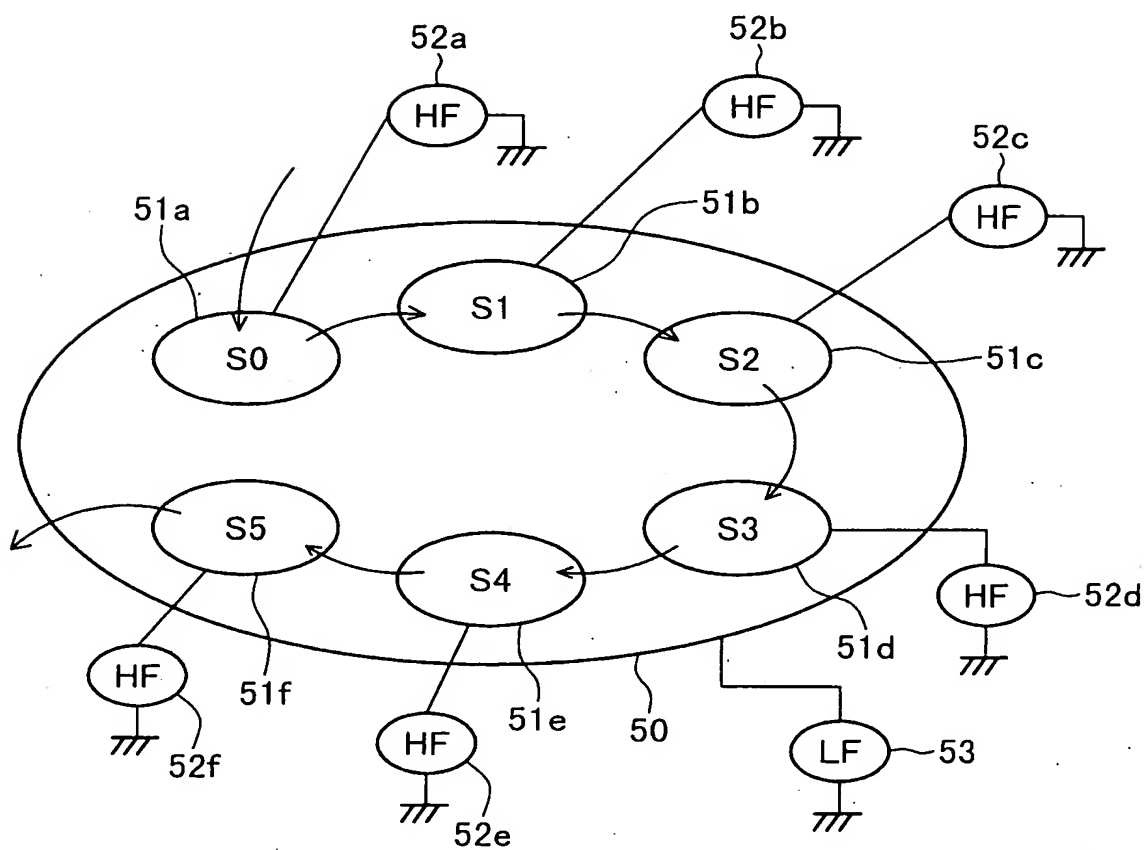


FIG. 9



SOURCE GASES: TMCTS:1ml/min, CO₂:5000sccm

FIG. 10

SAMPLE No.	PRESSURE (torr)	HF(W)	LF(W)	DEPOSITION RATE (nm/min)	THICKNESS NON-UNIFORMITY (%)	REFRACTIVE INDEX	HARDNESS (GPa)	YOUNG MODULUS (GPa)	SPECIFIC DIELECTRIC CONSTANT
1	4.0	300	200	363	13.48	1.446			
2	3.7	300	200	333	7.11	1.452			
3	3.5	300	200	312	5.01	1.456	4.0	23.6	3.0
4	3.0	300	200	270	4.69	1.470			
5	3.5	400	270	425	3.21	1.459			
6	3.5	450	300	402	2.99	1.461	3.5	24.7	3.2
7	3.5	500	330	516	3.27	1.457			
8	3.5	550	370	559	3.29	1.459			
9	3.5	600	400	605	2.09	1.459	4.4	30.1	3.3
10	3.5	400	200	454	3.39	1.453			
11	3.5	450	200	367	4.76	1.451			
12	3.5	500	200	368	4.64	1.451			
13	3.5	550	200	377	2.78	1.450			
14	3.5	600	200	385	2.86	1.448	3.6	23.4	3.2
15	4.0	300	200	370	8.33	1.450			
16	4.0	600	0	89	6.09	1.404			
17	4.0	600	200	380	3.51	1.437			
18	4.0	600	400	669	1.80	1.462			
19	4.5	600	200	552	9.58	1.427			
20	4.5	800	200	649	3.69	1.424	2.0	17.3	2.85
21	4.5	900	200	666	3.96	1.422			
22	4.5	900	300	780	2.95	1.433			
23	5.0	1100	200	702	4.55	1.420			
24	5.0	1200	200	793	4.76	1.417			

FIG.11

FILM	COMPOSITION (at%)				SPECIFIC DIELECTRIC CONSTANT
	H	C	O	Si	
SiOC-A	20	21	35	24	3.0
SiOC-A:POX	25	18	35	22	3.1
SiOC-B	27	18	34	21	2.85
CORAL	32	16	34	18	2.9

FIG.12

